

Express Mail Label No.: EV 781042594 US  
Date of Deposit: February 22, 2006

02-24-06 TFW 1641  
Attorney Docket No.: 27353-508 NATL

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicants:** Roland KOZLOWSKI, *et al.*  
**Serial Number:** 10/506,756  
**International Application Number:** PCT/GB03/01049  
**Filing Date:** March 28, 2005  
**Priority Date:** March 13, 2002  
**Examiner:** Not Yet Assigned  
**Art Unit:** 1645  
**Confirmation Number:** 6585  
**For:** **ARRAYS AND METHODS**

**MAIL STOP AMENDMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**TRANSMITTAL LETTER**

Transmitted herewith for filing in the present application are the following documents:

1. Information Disclosure Statement (2 pages), in duplicate;
2. Modified Form 1449/PTO (2 pages), in duplicate;
3. Copies of Cited References: B1-4, C1-30; and
4. a Return Postcard.

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (212) 935-3000, New York, New York.

The Commissioner is authorized to charge any fees that may be due, or to credit any overpayment, to the undersigned's account, Deposit Account No. 50-0311 Ref. No. 27353-508-NATL, Customer No. 35437. A duplicate copy of this transmittal letter is enclosed herewith.

Respectfully submitted,

Date: February 22, 2006

*Michelle A. Klein*  
Ivor R. Elrifi, Reg. No. 39,529  
Michelle A. Klein, Reg. No. 55,296  
Attorneys for Applicants  
c/o MINTZ, LEVIN, *et al.*  
666 Third Avenue-24<sup>th</sup> Floor  
New York, New York 10017  
Telephone: (212) 983-3000  
Telefax: (212) 983-3115



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Roland KOZLOWSKI, *et al.*  
Serial Number: 10/506,756  
International Application Number: PCT/GB03/01049  
Filing Date: March 28, 2005  
Priority Date: March 13, 2002  
Examiner: Not Yet Assigned  
Art Unit: 1645  
Confirmation Number: 6585  
For: **ARRAYS AND METHODS**

**MAIL STOP AMENDMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, Applicants hereby make of record the document listed on the attached modified Form PTO-1449 (submitted in duplicate) in the above-identified application, a copy of which is submitted herewith.

The items of information contained in this Information Disclosure Statement were first cited 1) in the originally filed international application, 2) in the International Search Report mailed on November 10, 2003, or 3) in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement, and is being filed before the mailing date of a first Office Action on the merits for the above-identified application. Accordingly, no fee or certification is believed required.

It is respectfully requested that the Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims. It is also respectfully requested that the Examiner initial, sign and date, and return a copy of the signed modified Form PTO-1449 with the next U.S. PTO communication, to evidence that the cited information has been fully considered by the U.S. Patent and Trademark Office during the examination of this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that: (1) a search has been performed, the extent of any search performed, or that more relevant information does not exist; (2) the information cited in the Statement is, or is considered to be,

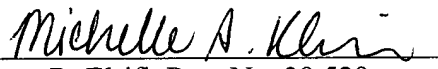
material to patentability as defined in 37 C.F.R. §1.56(b); and (3) the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

The order of presentation of the references should not be construed as an indication of the importance of the references. The Examiner is urged to form his/her own conclusion regarding the relevance of the cited information.

Please charge any fees that may be due, or credit any overpayment of same, to Deposit Account No. **50-0311**, Reference No. **27353-508 NATL**, Customer Number: **35437**.

Respectfully submitted,

Date: February 22, 2006

  
Ivor R. Elrifi, Reg. No. 39,529  
Michelle A. Klein, Reg. No. 55,296  
Attorneys for Applicants  
c/o MINTZ, LEVIN, *et al.*  
666 Third Avenue-24<sup>th</sup> Floor  
New York, New York 10017  
Telephone: (212) 983-3000  
Telefax: (212) 983-3115

Please type a plus sign (+) in this box



PTO/SB (12-97)  
OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>Modified Form 1449/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	Application Number	10/506,756
	Nationalized Date	March 28, 2005
	First Named Inventor	Kozlowski
	Group Art Unit	1645
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	27353-508 NATL

U.S. PATENT DOCUMENTS							
Exam Initials	Cite No.	U.S. Patent Document No.	Issue Date	Name of Patentee(s) or Applicant(s)	Class	Sub Class	Filing Date if Appropriate

FOREIGN PATENT DOCUMENTS							
Exam Initials	Cite No.	Foreign Patent Document Office	Number	Name of Patentee(s) or Applicant(s)	Date of Publication	English Yes	No
	B1	WO	00/54046	The Government of the USA	09/14/00	X	
	B2	WO	01/57198	Sense Proteomics Ltd.	08/09/01	X	
	B3	WO	01/62782	Shanghai Biowindow Gene Development, Inc.	08/30/01		X
	B4	WO	01/68869	Lexicon Genetics Incorporated	09/20/01	X	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
	C1	Jan, L.Y. and Jan Y.N. (1997) Receptor-regulated ion channels. <i>Curr. Opin. Cell Biol.</i> 9(2): 155-60.
	C2	Trimmer, J.S. (1998) Regulation of ion channel expression by cytoplasmic subunits <i>Curr. Opin. Neurobiol.</i> 8: 370-374.
	C3	Perez-Garcia, M.T. et al., (1994) Functional properties of cardiac L-type calcium channels transiently expressed in HEK293 cells. Roles of alpha 1 and beta subunits <i>J. Gen. Physiol.</i> 105: 289-305.
	C4	Brady, A.E., Limbird, L.E. (2002) G protein-coupled receptor interacting proteins: Emerging roles in localization and signal transduction. <i>Cell Signal</i> 14(4): 297-309.
	C5	Ruiz-Velasco, V. Ikeda, S.R., Puhl, H.L. (2002) Cloning, tissue distribution, and functional expression of the human G protein {beta}4-subunit. <i>Physiol. Genomics</i> 8(1): 41-50.
	C6	Walker, D. et al, (1998) A $\beta_4$ isoform-specific interaction site in the carboxyl-terminal region of the voltage-dependent $Ca^{2+}$ channel $\alpha_{1A}$ subunit. <i>J. Biol. Chem.</i> 273: 2361-2367.
	C7	Xu and Li, (1998) Auxiliary Subunits of Shaker-type potassium channels. <i>Trends Cardiovasc. Med.</i> , 8: 229-234.
	C8	Zhu, H., Klemic, J.F., Chang, S., Bertone, P., Casamayor, A., Klemic, K.G., Smith, D., Gerstein, M., Reed, M.A., Snyder, M. (2000) Analysis of yeast protein kinases using protein chips. <i>Nat. Genet.</i> 26(3): 283-9.
	C9	Dolly, J.O. and Parcej, D.N. (1996) Molecular properties of voltage-gated K <sup>+</sup> channels. <i>J. Bioenerg. Biomembr.</i> 28: 231-253.
	C10	Scott, V.E. et al., (1990) Alpha-dendrotoxin acceptor from bovine brain is a K <sup>+</sup> channel protein. Evidence from the N-terminal sequence of its larger subunit. <i>J. Biol. Chem.</i> 265: 20094-20097.
	C11	Wang, Z. et al, (1996) Comparison of Binding and Block Produced by Alternatively Spliced Kv $\beta$ 1 Subunits. <i>J. Biol. Chem.</i> , 271: 28311-28317.
	C12	Restituito, S. et al., (2001) Ca <sup>2+</sup> Channel Inactivation Heterogeneity Reveals Physiological Unbinding

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS		
Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
		of Auxiliary Subunits <i>Biophys. J.</i> 81: 89-96.
	C13	Strader, C.D. et al., (1994) Structure and function of G-protein-coupled receptors. <i>Annu. Rev. Biochem.</i> 63: 101-132.
	C14	Strader, C.D. et al., (1995) The family of G-protein-coupled receptors. <i>FASEB J.</i> 9: 745-754.
	C15	Tucker, S.J. and Ashcroft, F.M. (1999) Mapping of the physical interaction between the intracellular domains of an inwardly rectifying potassium channel, Kir6.2. <i>J. Biol. Chem.</i> 274: 33393-33397.
	C16	Yokoyama, C.T. et al, (1997) Phosphorylation of the synaptic protein interaction site on N-type calcium channels inhibits interactions with SNARE proteins. <i>J. Neurosci.</i> 17: 6929-6938.
	C17	Gelber, E. et al, (1999) Structure and function of the third intracellular loop of the 5-HT <sub>2A</sub> receptor: The third intracellular loop is $\alpha$ -helical and binds purified arrestins. <i>J. Neurochem.</i> 72(5): 2206-14
	C18	Weixel, K.M. and Bradbury, N.A. (2001) $\mu$ 2 Binding directs the cystic fibrosis transmembrane conductance regulator to the clathrin-mediated endocytic pathway. <i>J. Biol. Chem.</i> 276(49): 46251-46259.
	C19	Tu, J.C. et al. (1998) Homer binds a novel proline-rich motif and links group 1 metabotropic glutamate receptors with IP <sub>3</sub> receptors. <i>Neuron</i> 21: 717-726.
	C20	Shieh, B-H and Zhu, M-Y (1996) Regulation of the TRP Ca <sup>+</sup> channel by INAD in <i>Drosophila</i> photoreceptors. <i>Neuron</i> 16: 991-998.
	C21	Pongs, O., Leicher, T., Berger, M. et al. (1999) Functional and molecular aspects of voltage-gated K <sup>+</sup> channel $\beta$ subunits. <i>Ann. NY Acad. Sci.</i> 868:344-55.
	C22	Walker, D. and Waard, M. (1998) Subunit interaction sites in voltage-dependent Ca <sup>2+</sup> channels: role in channel function. <i>Trends Neurosci.</i> 21(4):148-54.
	C23	Onrust, R., Herzmark, P. et al (1997) Receptor and $\beta\gamma$ binding sites in the $\alpha$ subunit of the retinal G-protein transducin. <i>Science</i> 275: 381-384.
	C24	Bourne, H.R. (1997) How receptors talk to trimeric G proteins. <i>Curr. Opin. Cell. Biol.</i> 9: 134-142.
	C25	Ferguson, S.S.G. (2001) Evolving concepts in G protein-coupled receptor endocytosis: The role in receptor desensitization and signaling. <i>Pharmacol. Rev.</i> , 53: 1-24.
	C26	Krupnick, J.G. et al., (1994) Arrestin-rhodopsin interaction. Multi-site binding delineated by peptide inhibition. <i>J. Biol. Chem.</i> 269: 3226-3232.
	C27	Nam, T-W et al., (2001) The <i>Escherichia coli</i> glucose transporter enzyme IICB <sup>Glc</sup> recruits the global repressor MIC. <i>EMBO J.</i> , 20: 491-498.
	C28	Zhang, J-Z et al., (2001) Overexpression of stomatin depresses GLUT-1 glucose transporter activity. <i>Am. J. Physiol. Cell. Physiol.</i> 280: C1277-C1283.
	C29	Le Bouter, S. et al., (2003) Microarray Analysis Reveals Complex Remodeling of Cardiac Ion Channel Expression with Altered Thyroid Status. <i>Circ. Res.</i> 92: 234-242.
	C30	Markert, J.M. et al., (2001) Differential gene expression profiling in human brain tumors. <i>Physiol. Genomics</i> 5: 21-33.

\*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. \_\_\_\_\_, filed \_\_\_\_\_, and relied upon for an earlier filing date under 35 U.S.C. §120 (continuation, continuation-in-part, and divisional applications).

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.

Include copy of this form with next communication to applicant.